# Bombus insularis (Indiscriminate Cuckoo Bumble Bee )

Report Date: January 13, 2016

**Priority 2 Species of Greatest Conservation Need (SGCN)** 

Class: Insecta (Insects)

Order: Hymenoptera (Ants, Bees, Wasps And Sawflies)
Family: Apidae (Honey Bees, Bumble Bees, And Allies)

#### **General comments:**

despite secure global status and presence of unlimited habitat, only 3 museum specimens for ME, none of which are recent; species has not shown up in limited recent surveys but comprehensive statewide survey effort is lacking

#### Species Conservation Range Maps for Indiscriminate Cuckoo Bumble Bee:

Town Map: <u>Bombus insularis\_Towns.pdf</u>
Subwatershed Map: <u>Bombus insularis\_HUC12.pdf</u>

#### **SGCN Priority Ranking - Designation Criteria:**

**Risk of Extirpation: NA** 

**State Special Concern or NMFS Species of Concern:** 

Bombus insularis is listed as a species of Special Concern in Maine.

**Recent Significant Declines: NA** 

**Regional Endemic: NA** 

High Regional Conservation Priority: NA High Climate Change Vulnerability: NA

**Understudied rare taxa:** 

Recently documented or poorly surveyed rare species for which risk of extirpation is potentially high (e.g. few known occurrences) but insufficient data exist to conclusively assess distribution and status. \*criteria only qualifies for Priority 3 level SGCN\*

Notes: despite secure global status and presence of unlimited habitat, only 3 museum specimens for ME, none of which are recent; species has not shown up in limited recent surveys but comprehensive statewide survey effort is lacking

#### **Historical:**

Species currently listed as state (SH) or global (GH) historical (by MDIFW or NatureServe) that have some reasonable probability of rediscovery with further survey effort.

State Rank: SU, Global Rank: G4G5, Rounded Global Rank: G4, MDIFW Historical: Yes

**MDIFW Historical Notes:** despite secure global status and presence of unlimited habitat, only 3 museum specimens for ME, none of which are recent; species has not shown up in limited recent surveys but comprehensive statewide survey effort is lacking

**Culturally Significant: NA** 

#### **Habitats Assigned to Indiscriminate Cuckoo Bumble Bee:**

Formation Name Agricultural

Macrogroup Name Agricultural

**Habitat System Name:** Agricultural Macrogroup - Unknown Habitat System **Notes:** habitat generalist - various unknown

types

Formation Name Boreal Upland Forest

Macrogroup Name Boreal Upland Forest

**Habitat System Name:** Boreal Upland Forest Macrogroup - Unknown Habitat System **Notes:** *habitat generalist - various unknown types* 

ulikilowii types

### Bombus insularis (Indiscriminate Cuckoo Bumble Bee)

**Priority 2 Species of Greatest Conservation Need (SGCN)** 

Class: Insecta (Insects)

Order: Hymenoptera (Ants, Bees, Wasps And Sawflies)
Family: Apidae (Honey Bees, Bumble Bees, And Allies)

Formation Name Developed

Macrogroup Name Urban-Suburban Built

Habitat System Name: Residential - Low Intensity Notes: habitat generalist - various unknown types
Habitat System Name: Residential - Rural-Sparse Notes: habitat generalist - various unknown types

Habitat System Name: Urban-Suburban Built Macrogroup - Unknown Habitat System Notes: habitat generalist - various

Report Date: January 13, 2016

unknown types

Formation Name Grassland & Shrubland

Macrogroup Name Ruderal Shrubland & Grassland

Habitat System Name: Ruderal Shrubland & Grassland Macrogroup - Unknown Habitat System Notes: habitat

generalist - various unknown types

Formation Name Northeastern Upland Forest

Macrogroup Name Central Oak-Pine

Habitat System Name: Central Oak-Pine Macrogroup - Unknown Habitat System Notes: habitat generalist - various

unknown types

Macrogroup Name Northern Hardwood & Conifer

Habitat System Name: Northern Hardwood & Conifer Macrogroup - Unknown Habitat System Notes: habitat

generalist - various unknown types

#### **Stressors Assigned to Indiscriminate Cuckoo Bumble Bee:**

Stressor Priority Level based on Severity and Actionability

	Moderate Severity	High Severity
Highly Actionable	Medium-High	High
Moderately Actionable	Medium	Medium-High
Actionable with Difficulty	Low	Low

**IUCN Level 1 Threat** Other Options

IUCN Level 2 Threat: Lack of knowledge

Severity: Moderate Severity Actionability: Highly actionable

Notes: No modern EOs in ME; lack of comprehensive statewide survey effort to identify occurrences and determine

species status

IUCN Level 1 Threat Pollution

IUCN Level 2 Threat: Agricultural and Forestry Effluents

Severity: Severe Actionability: Moderately actionable

Notes: Pesticides (e.g., seed/nursery stock innoculation, agricultural applications); past impacts (i.e., severe declines)

actionable with difficulty, but future impacts moderately actionable (e.g., changes in pesticide type and use)

IUCN Level 1 Threat Agriculture and Aquaculture

IUCN Level 2 Threat: Annual and Perennial Non-timber crops

Severity: Moderate Severity Actionability: Moderately actionable

Notes: Habitat loss and fragmentation via intensive land management practices; can also create foraging and nesting

habitat

## Bombus insularis (Indiscriminate Cuckoo Bumble Bee)

Report Date: January 13, 2016

**Priority 2 Species of Greatest Conservation Need (SGCN)** 

Class: Insecta (Insects)

Order: Hymenoptera (Ants, Bees, Wasps And Sawflies)
Family: Apidae (Honey Bees, Bumble Bees, And Allies)

IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Commercial and Industrial Areas

Severity: Moderate Severity Actionability: Moderately actionable

Notes: Habitat loss and fragmentation

IUCN Level 2 Threat: Housing and Urban Areas

**Severity:** Moderate Severity **Actionability:** Moderately actionable **Notes:** Habitat loss and fragmentation; can also create foraging habitat

IUCN Level 1 Threat Invasive and Other Problematic Species, Genes and Diseases

**IUCN Level 2 Threat:** Invasive Non-native-Alien Species-Diseases

**Severity:** Severe **Actionability:** Actionable with difficulty

Notes: Introduced pathogens, parasites/diseases from imported commercial Bombus colonies; past impacts are likely

irreversible, but future impacts potentially could be minimized/prevented; impacts from invasive plants?

IUCN Level 1 Threat Transportation and Service Corridors

IUCN Level 2 Threat: Roads and Railroads

Severity: Moderate Severity Actionable with difficulty

Notes: Collision with vehicles; habitat loss and fragmentation

#### **Species Level Conservation Actions Assigned to Indiscriminate Cuckoo Bumble Bee:**

None. Only species specific conservation actions that address high (red) or medium-high (orange) priority stressors are summarized here.

#### Conservation Actions Associated with the Bumble Bees Guild:

Conservation Action Category: Survey and Monitoring Biological Priority: high Type: on-going

Conduct statewide surveys to document species diversity, distribution and relative abundance.

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Conservation Action Category: Research Biological Priority: high Type: new

Produce a statewide atlas and conservation assessment

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

**Conservation Action** Category: Public Outreach Biological Priority: moderate Type: new

Develop and implement outreach materials to raise public awareness of native pollinator ecology, threats and conservation needs, and to encourage use of Integrated Pest Management practices.

Stressor(s) Addressed By This Conservation Action

Agricultural and Forestry Effluents

#### **Broad Taxonomic Group Conservation Actions:**

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-1.

# **Bombus insularis** (Indiscriminate Cuckoo Bumble Bee ) Priority 2 Species of Greatest Conservation Need (SGCN)

Report Date: January 13, 2016

Class: Insecta (Insects)

Order: Hymenoptera (Ants, Bees, Wasps And Sawflies)
Family: Apidae (Honey Bees, Bumble Bees, And Allies)

#### **Habitat Based Conservation Actions:**

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.